

Abstract Submitted
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Method For Identifying Cosmic Ray Events In Radar Data¹ JON PAUL LUNDQUIST, TELESCOPE ARRAY PROJECT, RADAR GROUP COLLABORATION — Detection of ultra-high energy cosmic rays using radar is an idea being developed in a recent addition to the Telescope Array (TA) Project at the University of Utah. A 54 MHz transmitter illuminates the skies above the TA, and we search for radar echoes in coincidence with cosmic ray airshowers detected by conventional means. The resulting data presents several interesting difficulties. The expectation is that the radar echoes will happen on time scales of tens of microseconds, and therefore the data must be recorded at very high sample rates. Data must be sifted in real time, and accurate timing information must be preserved so as to correlate with TA data. I present two methods, using Discrete Fourier Transforms and Discrete Wavelet Analysis.

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